



PURITY™ FG

Plant Tough. Food Safe.

Industrial Food Grade Lubricants

Beyond today's standards.



FEATURING MICROL™† ANTIMICROBIAL PRESERVATIVE
TO PROTECT FOOD GRADE LUBRICANTS.



GOING BEYOND TODAY'S STANDARDS

WHEN IT COMES TO DELIVERING THE ULTIMATE IN LUBRICATION, PETRO-CANADA IS A GLOBAL LEADER.

For more than 25 years, Petro-Canada has researched, developed and produced over 350 products that are marketed to more than 60 countries. With one of the most sophisticated manufacturing facilities of its kind in North America, we have the infrastructure that ensures our customers can count on a nimble, efficient supply source.

At Petro-Canada we believe you have to go beyond accepted limitations to deliver the leading-edge products that customers demand. This translates to lubricants that exceed customer expectations for performance and quality. That is why we have greases that are effective under extreme operating conditions, hydraulic oils that keep equipment running smoothly and agricultural spray oils that fight pests. We even have a heat transfer fluid that is acceptable for use in a pipeline in the delicate Amazon rainforest.

PETRO-CANADA'S PURE ADVANTAGE!

Petro-Canada's white oils are 99.9% pure. Lubricants formulated with our base oils deliver excellent performance and productivity. Despite these successes, we never stop asking questions. We continuously conduct research and development work with industrial and automotive OEMs around the world to develop new lubricants, fluids and greases to help them meet and exceed their goals. At Petro-Canada, we're going beyond today's standards.





The food industry presents some unique challenges for lubricants. The demands of increasingly harsh operating environments and the stringent safety restrictions of lubricant composition are tough to balance in keeping equipment performance levels high. But these are just the kind of challenges that Petro-Canada thrives on. We have been committed to supplying lubricants to the food industry for a long time. The performance of our PURITY™ FG lubricants exceeds many of the conventional lubricants.

THE FIRST CHOICE SHOULD BE THE RIGHT CHOICE – PUT PURITY FG TO THE TEST.

PURITY FG products deliver the productivity benefits you need throughout your food processing plant, so you can reduce the risk of contamination and cut down on your costly inventory of lubricants.

At Petro-Canada we pride ourselves in offering a full solution. We carry a complete line of industrial lubricants suitable for ancillary use in food processing plants.

That is not all; Petro-Canada is the world's largest producer of pharmaceutical grade white oil used in a variety of food processing industries.

As expected PURITY FG is NSF registered, meets Canadian Food Inspection Agency required standards, and has Kosher, Pareve and Halal registrations. It fits perfectly into your HACCP or GMP plan.



PURITY FG is remarkably Food Safe and Plant Tough. NOW available with MICROL[†].

Now, with the introduction of MICROL, Petro-Canada's commitment to the food industry has reached a new level. MICROL Preservative is the first and the only antimicrobial agent that is registered by the Environmental Protection Agency (EPA) for use in food grade lubricants to preserve the lubricant. When you want to be sure you are using approved lubricants, be sure that your lubricant is preserved with MICROL.

1st EPA REGISTERED
Antimicrobial Preservative to
Protect Food Grade Lubricants



THE RIGHT SOLUTION

We know how much you have invested in building your brand. We also know how important it is to protect it.

Hygiene, product liability and quality assurance are critical in the food industry and that is why Petro-Canada is committed to offering the best in class PURITY FG products.

We fully understand the breadth of the food industry and offer a complete line of food grade and non-food grade lubricants to meet all your needs in every segment. We serve our customers globally and have a proven track record of success to which customers can attest.

PURITY FG is now available with MICROL Antimicrobial Preservative to protect the lubricant.



MEAT & POULTRY PROCESSING



Leading meat and poultry processors around the world such as Maple Leaf Foods in Canada find that PURITY FG products stand up to their severe operating conditions and help optimize food safety.

BEVERAGE



With PURITY FG the beverage industry does not have to compromise machine life for food safety. Beverage companies tell us that using PURITY FG increases their confidence in keeping downtime to a minimum in their delicate operations.

DAIRY PRODUCT MANUFACTURING

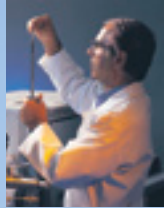


Petro-Canada products take the risk out of contamination and reduce oil consumption for customers such as cheese producer and 2 time World Gold Medallist, NORDEX GROUP (Denmark).

BAKERIES



Our bakery customers frequently express their satisfaction with the proven value that PURITY FG lubricants provide.



SUGAR & CONFECTIONERY MANUFACTURING



The largest confectionery companies in the world choose PURITY FG – that is a true testament of the quality of our product line.

FRUITS & VEGETABLES PRESERVING



For this sector, we offer a total solution with our full line of food grade and non-food grade lubricants.

SEAFOOD PRODUCT PREPARATION & PACKAGING



Even in harsh salty water environments, our products have demonstrated the durability that helped establish the reputation of PURITY FG.

GRAIN & OILSEED MILLING



A leading worldwide cereal manufacturing company trusts our food grade lubricants enough to recommend their use in most of their North American plants.

ANIMAL FOOD MANUFACTURING



The benefits of PURITY FG lubricants have attracted major feed mills, particularly in highly loaded or shock loaded applications.

OTHER FOOD MANUFACTURING



Our complete range of industrial strength food grade lubricants helps many companies in this sector meet their commitments to food safety.

PURITY FG lubricants and greases are used by many of the leading meat processors around the world including those involved in slaughtering, meat cutting and further processing.

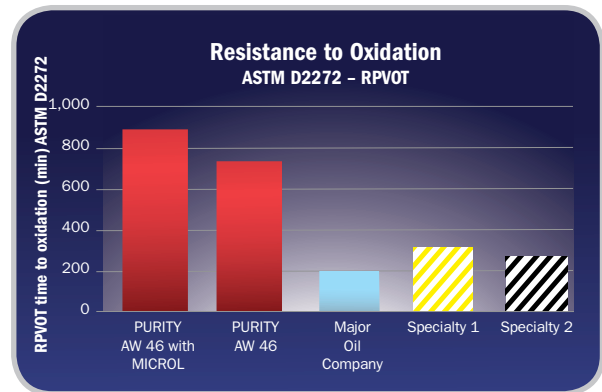
KEY CHALLENGES

Meat processing is a very competitive market and success demands maximum productivity. There are typically severe operating conditions such as heat, humidity, water cleaners, sanitizers, and food contamination that can affect equipment performance.

The industry also has a high level of concern with food safety as evidenced by many food quality protocols (**HACCP, GMP, ISO 22000**). Plants are inspected by government agencies and 3rd party companies, and corporate reputations are impacted by product quality.

PETRO-CANADA'S SOLUTION

Petro-Canada has a long history of working with the industry and understanding its needs. To meet the demands of meat processors, Petro-Canada offers a full line of industrial strength food grade lubricants. Innovative MICROL delivers antimicrobial protection to guard the lubricant from degradation. In addition, we provide technical support in the form of plant surveys, fluid analysis and lubrication optimization.



PURITY FG AW Hydraulic Fluid – long-life and excellent wear protection

“ PURITY FG really stood up to the abuse of our machinery. That’s why I’m replacing all of our old oils and greases with it. ”

Lou Falcone, Maintenance Manager
Maple Leaf Foods (Canada)

KEY PRODUCTS

- **PURITY FG AW Hydraulic Fluids** – Specially formulated with outstanding oxidation resistance to maximize service life
- **PURITY FG Greases** – Proven to withstand wide temperature swings and the demanding cleaning processes in meat processing environments
- **PURITY FG Trolley Fluid** – Formulated for hooks, trolleys and conveyors and satisfies all three key performance requirements in one fluid: wear protection, rust protection and drip protection

For a complete list of products see page 9.



Excellent wear protection = longer equipment life

“ PURITY FG grease has superior water resistance; the bearings are constantly in salt water and exposed to high levels of grit; there have been no visible signs of moisture seeps into the bearings. It is a very durable product. ”

Erika Wiksten, Owner and General Manager
Minterbrook Oyster Company (Washington, U.S.A.)

KEY PRODUCTS

- **PURITY FG EP and Synthetic EP Gear Fluids** – Excellent performing gear oils with great wear properties
- **PURITY FG2 Clear Grease** – Specially formulated to offer excellent wear protection promoting extended equipment life
- **PURITY FG AW Hydraulic Fluids** – Formulated with outstanding oxidation resistance to maximize service life

For a complete list of products see page 9.

Petro-Canada Food Grade Lubricants are used to meet the special requirements of a wide array of beverage industries including wine, beer, coffee & tea, fruit juices, mineral water and soft drinks.

KEY CHALLENGES

The beverage industry can experience varying levels of demand throughout the year. Constant operation during busy months makes downtime very expensive and limits the opportunities for scheduled maintenance. In addition, since demand for products often shifts with limited notice, changing products and package sizes causes significant impact on production staff in their re-configuration of equipment.

The wide variety of equipment in use further complicates the selection of lubricants. The beverage industry has a high level of concern with food safety as evidenced by the various food quality protocols (**HACCP, GMP, ISO 22000**). Plants are inspected by government agencies and 3rd party companies, and corporate reputations are impacted by product quality.

PETRO-CANADA'S SOLUTION

Petro-Canada offers a full line of industrial strength food grade lubricants. This includes a line of gear oils and greases that delivers excellent performance to help extend the life of bottling equipment and can seamers plus a range of greases that can withstand the demanding cleaning process.

PURITY FG with MICROL resists lubricant degradation, odour and discolouration. In addition, we provide technical support in the form of plant surveys, fluid analysis and lubrication optimization.

Petro-Canada takes great pride in providing the dairy segment with solutions that help them manage their lubricant needs in varying areas including production, processing and packaging. The dairy segment produces a wide range of products including milk, butter, cheese, yogurt and ice cream, with areas of application requiring specific solutions.

KEY CHALLENGES

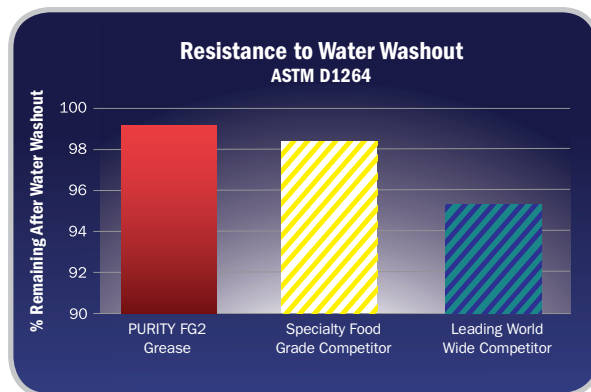
This extremely competitive sector, with its many mergers and acquisitions, has resulted in very large producers and increasingly commoditized markets. Constant operation with little time for maintenance; harsh conditions due to heat, humidity, water, cleaners, sanitizers and food contamination; and microbe control in food processing areas add to the challenge.

Changes in the market, including consumer demand for low fat, low cholesterol, low carbohydrate and lactose-free products have impacted plant configuration and production costs. The industry maintains a high level of concern with food safety as seen in the many food quality protocols (**HACCP, GMP, ISO 22000**). Facilities are frequently inspected by government agencies and 3rd party companies and corporate reputations are affected by product quality.

PETRO-CANADA'S SOLUTION

Petro-Canada meets the needs of this challenging market with a full line of industrial strength food grade lubricants, including greases that can withstand wide temperature swings and the demanding cleaning processes. We also offer air compressor and vacuum pump lubricants with outstanding oxidation resistance formulated to maximize service life and minimize wear.

We provide valuable technical support – including plant surveys, fluid analysis and others. Our global distribution capability allows centralized purchasing. In addition, we offer antimicrobial protection to preserve the lubricant from degradation. Plus Petro-Canada has a long history of leading-edge research and product development to support equipment advancements.



Grease – Excellent resistance to water washout

“ Since we began using PURITY FG Grease, our grease consumption has fallen significantly and the lifetime of the bearings has increased dramatically. ”

Allan Nielsen, Maintenance Manager
Norager Mejeri A/S (Denmark)

KEY PRODUCTS

- **PURITY FG Greases** – Specially formulated to withstand wide temperature swings and the very demanding cleaning processes in the dairy environment
- **PURITY FG Compressor Fluids** – Designed with outstanding oxidation resistance and superior water separability to maximize service life and minimize wear
- **PURITY FG AW Hydraulic Fluids** – Specially formulated with outstanding resistance to oxidation to maximize service life

For a complete list of products see page 9.



Wide temperature protection and superior load carrying capability

“ With PURITY FG we extended the maintenance interval of the machines from 5,000 to 8,000 hours. ”

Fiorino Patrini, Maintenance Manager
BakeMark SPA (Italy)

KEY PRODUCTS

- **PURITY FG2 Synthetic Food Machinery Grease** – Affords wider temperature protection and enhanced load carrying capability
- **PURITY FG Chain Fluids** – Developed to offer excellent adhesion, resistance to water spray and protection against wear, rust and corrosion for all types of drive and conveyor chains
- **PURITY FG Compressor Fluids** – Specially formulated with outstanding oxidation resistance and are ashless and odourless

For a complete list of products see page 9.

Petro-Canada takes great pride in providing the bakery segment with effective solutions that help them manage their challenging lubricant needs. The bakery segment produces many different products: bread, cereal, cookies, pastry, crackers, pasta, and tortillas.

KEY CHALLENGES

Ongoing market changes including consumer demand for low carbohydrate products have significantly impacted the bakery segment. While demand for existing products is reduced, many new products have been added, impacting economies of scale due to smaller production runs. Bakeries must operate under severe conditions and operations including high temperatures that cause severe stress on the equipment and washing procedures that cause rust and corrosion problems.

The challenge for this market is to find efficiencies and save money by improving processes to remain competitive. This industry has a high level of concern with food safety as evidenced by the many food quality protocols (**HACCP, GMP, ISO 22000**). Facilities are inspected by government agencies and 3rd party companies and corporate reputations are affected by product quality.

PETRO-CANADA'S SOLUTION

Petro-Canada helps the bakery segment find the cost efficiencies they need, through a full line of industrial strength food grade lubricants, including greases that can withstand wide temperature swings and the demanding cleaning processes and chain and conveyor fluids that offer excellent adhesion and protection against wear, rust and corrosion. We also offer air compressor and vacuum pump lubricants with outstanding oxidation resistance formulated to maximize service life and minimize wear.

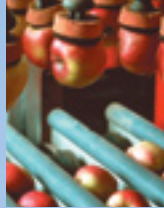
Petro-Canada also provides valuable technical support such as plant surveys and fluid analysis. Our global distribution capability allows centralized purchasing. In addition, we offer an excellent record of leading-edge research and product development to support equipment advancements.

PURITY FG – A FULL MENU OF FOOD GRADE LUBRICANTS

APPLICATIONS – PURITY FG FLUIDS

APPLICATION	PRODUCT	PERFORMANCE FEATURES	KEY ADVANTAGES*
Hydraulic	PURITYFG AW Hydraulic Fluid with MICROL Registered NSF H1 and CFIA n	<ul style="list-style-type: none"> • 1st EPA Registered Antimicrobial Preservative to protect the lubricant • Excellent resistance to breakdown from air • Available in ISO VG 32, 46, 68, 100 	Antimicrobial product protection preserving the lubricant from degradation.
	PURITYFG AW Hydraulic Fluid Registered NSF H1 and CFIA n and n2	<ul style="list-style-type: none"> • Excellent resistance to breakdown from air • Available in ISO VG 32, 46, 68, 100 	Longer fluid life leads to less downtime.
Heavy enclosed gears	PURITYFG EP Gear Fluid with MICROL Registered NSF H1 and CFIA n	<ul style="list-style-type: none"> • 1st EPA Registered Antimicrobial Preservative to protect the lubricant • Excellent extreme pressure properties • Protects against damage due to wear, rust and corrosion • Available in ISO VG 100, 150, 220 	Antimicrobial product protection preserving the lubricant from degradation.
	PURITYFG EP Gear Fluid Registered NSF H1 and CFIA n	<ul style="list-style-type: none"> • Excellent extreme pressure properties • Protects against damage due to shock loading, long-term wear, build-up of sludge and varnish, rust and corrosion • Available in ISO VG 100, 150, 220, 320, 460 	Stronger wear protection promotes fewer production upsets and higher productivity.
	PURITYFG Synthetic EP Gear Fluid Registered NSF H1 and CFIA n	<ul style="list-style-type: none"> • Formulated for longer life and reduced downtime, even at high temperatures and in the presence of water or acidic contamination • Protects gears, bearings and equipment operating under heavy loads • Ideal for gearboxes, pumps and bearings operating under wide temperature swings • Reduces seizure, scuffing and spalling • Available in ISO VG 220 	Ideal for wide temperature application with excellent wear protection.
Chains and conveyors	PURITYFG Chain Fluid Registered NSF H1 and CFIA n	<ul style="list-style-type: none"> • Excellent tackiness, resists water wash-off • Excellent extreme pressure properties - FZG stage 12 pass • Provides protection against wear, rust and corrosion • Suitable for brush, drip or centralized applications • Available in light and heavy grade 	High resistance to water wash-off promotes less consumption and need for reapplication.
Compressors and Vacuum Pumps	PURITYFG Compressor Fluid Registered NSF H1 and CFIA n	<ul style="list-style-type: none"> • Outstanding oxidation resistance • 4000 hour service in rotary screw and 1000 hour service in vane compressors • Superb protection against rust and corrosion • Available in ISO VG 32, 46, 68, 100 	Strong resistance to sludge and varnish formation promotes reduced downtime.
Multi-functional	PURITYFG Spray Registered NSF H1 and CFIA n	<ul style="list-style-type: none"> • Formulated with tackifiers to stay in place and resist water wash-off • High load carrying and anti-wear properties • Convenient method to lubricate chains, way guides, bearings, gears, open gears and other general lubrication 	Convenient spray leads to quick application.
Hook and trolley system	PURITYFG Trolley Fluid Registered NSF H1 and CFIA n	<ul style="list-style-type: none"> • Protects better against wear and rust than many leading competitor fluids • Excellent oxidation stability 	Excellent wear and rust protection promotes longer equipment life.
Heat transfer system	PURITYFG Heat Transfer Fluid Registered NSF HT1 and CFIA t1	<ul style="list-style-type: none"> • Suitable for liquid phase application up to 326°C/620°F • Higher thermal and oxidative stability than many leading competitors, which can result in extended fluid life and lower operating costs • Suitable for food related operations such as the manufacturing of food product packaging materials 	Great thermal and oxidative stability promotes longer life.
Release Agent Wipe Down Oil	PURITYFG White Oils Registered NSF H1 & 3H and CFIA n & n3	<ul style="list-style-type: none"> • NF/USP quality white mineral oils • Available in the following grades: 15, 35, 90 • Odourless, tasteless and will not stain 	High quality grade white oil.

*Based on lab testing.



APPLICATIONS – PURITY FG GREASES

APPLICATION	PRODUCT	PERFORMANCE FEATURES	RECOMMENDED OPERATING TEMPERATURES	KEY ADVANTAGES*
Multi-purpose grease for general plant use	PURITYFG2 Grease with MICROL Registered NSF H1 and CFIA n (pending) NLGI Grade 2	<ul style="list-style-type: none"> • 1st EPA Registered Antimicrobial Preservative to protect the lubricant • Polyurea Complex • Very good resistance to water washout and spray loss • Excellent anti-wear and EP properties • Very effective protection against rust and corrosion 	-20°C/-4°F to 70°C/158°F	Antimicrobial product protection preserving the lubricant from degradation.
	PURITYFG2 Grease Registered NSF H1 and CFIA n NLGI Grade 2	<ul style="list-style-type: none"> • Aluminum Complex • Greater resistance to water washout and spray loss • Excellent anti-wear and EP properties • Very effective protection against rust and corrosion 	-20°C/-4°F to 160°C/320°F	Better water washout and spray loss promotes lower consumption.
Multi-purpose grease for low temperature	PURITYFG00 Grease Registered NSF H1 and CFIA n NLGI Grade 00	<ul style="list-style-type: none"> • Aluminum Complex • Excellent anti-wear and EP properties • Very effective protection against rust and corrosion • Excellent choice for leaky, enclosed gear cases and auto lube systems 	-35°C/-31°F to 120°C/248°F	Better water washout and spray loss promotes greater long-term equipment protection against rust and corrosion.
Multi-purpose grease for wide temperature	PURITYFG2 Synthetic Grease Registered NSF H1 and CFIA n NLGI Grade 2	<ul style="list-style-type: none"> • Calcium Sulfonate Complex • Higher load carrying capability, excellent protection against wear • Strong resistance to lubricant breakdown and water washout • Effective across a wider range of temperature extremes 	-40°C/-40°F to 200°C/392°F	Excellent wear protection promotes longer bearing life.
Heavy duty grease	PURITYFG2 Extreme Grease Registered NSF H1 and CFIA n (pending) NLGI Grade 2	<ul style="list-style-type: none"> • High viscosity, Semi Synthetic, Aluminum Complex • Greater protection of gears, bearings and equipment when operating from low to medium speed with heavy loads • Effective protection in applications subjected to high temperature, high pressure, and heavy loads (such as in Pellet Mills) 	-20°C/-4°F to 160°C/320°F	Greater film strength sustains heavy loads.
Multi-purpose colourless grease	PURITYFG2 CLEAR Grease Registered NSF H1 and CFIA n NLGI Grade 2	<ul style="list-style-type: none"> • Contaminants are more visible • Greater protection of gears and bearings • Effective protection against rust and corrosion 	-20°C/-4°F to 160°C/320°F	Greater wear protection when compared to several other clear greases which promotes equipment protection.

*Based on lab testing.

NSF CLASSIFICATIONS

H1	Acceptable for incidental food contact
H2	No contact with food
3H	Release Agents
HT1	Acceptable for use as a heat transfer fluid where there is a possibility of incidental food contact

CFIA CLASSIFICATIONS

n	Approved for incidental/accidental food contact
n1	General oils and greases (not food grade)
n2	Hydraulic oils (food grade and not food grade)
n3	Protective oils
t1	Refrigerant/Heat Exchanger Agents (General)

For a complete list of PURITY FG approvals, consult a Petro-Canada Technical Service Representative.



Petro-Canada's industrial strength PURITY FG lubricants are available in a complete range of plant tough, food safe formulations to meet the demands of the food industry.





Minimize downtime. Maximize uptime.

Petro-Canada's No-nonsense Warranty: "Petro-Canada will repair damaged equipment, or replace damaged equipment parts resulting from a failure due to defects of the Petro-Canada lubricant, as long as the lubricant is used in accordance with your equipment manufacturer's and our recommendations."

Our business is keeping your business going.

If you would like to know more about Petro-Canada's PURITY FG or any other product in our complete line of quality lubricants, please contact us at:

Head Office:

**Petro-Canada Lubricants
2310 Lakeshore Road West
Mississauga, Ontario
Canada L5J 1K2**



- Canada - West** Phone 1-800-661-1199
- East (English)** Phone 1-800-268-5850
- (French)** Phone 1-800-576-1686
- United States** Phone 1-888-284-4572
- Europe** Phone +44 (0) 2476-247294
- Other Areas** Phone 1-416-730-2408
- E-mail** lubecsr@petro-canada.ca
- Internet** lubricants.petro-canada.ca

**Petro-Canada America Lubricants
980 North Michigan Avenue
Suite 1400, #1431
Chicago, Illinois
USA 60611**

**Petro-Canada Europe Lubricants
The Manor, Haseley Business Centre
Warwick, Warwickshire
CV35 7LS
United Kingdom**

Authorized Lubricants Distributor:



Beyond today's standards.™

*MICROL is an antimicrobial product protection agent.
™Trademark of Petro-Canada